CEA ACTION PROPOSAL

Per California Code of Regulations, title 2, section 548.5, the following information will be posted to CalHR's Career Executive Assignment Action Proposals website for 30 calendar days when departments propose new CEA concepts or major revisions to existing CEA concepts. Presence of the department-submitted CEA Action Proposal information on CalHR's website does not indicate CalHR support for the proposal.

A. GENERAL INFORMATION

1. Date: 11/8/2022

2. Department: California Energy Commission

3. Organizational Placement (Division/Branch/Office Name)

Energy Assessments Division

4. CEA Position Title

Deputy Director of Demand Forecasting and Scenario Development

5. Summary of proposed position description and how it relates to the program's mission or purpose. (*2-3 sentences)*

The CEA has leadership responsibilities on all aspects of CEC's responsibilities over the California Demand Forecast, which is foundational to energy planning across energy agencies. The CEA will oversee policy decisions around major forecast changes year over year. For the next major forecast, these include updating projections of economic and demographic data, updating the electricity rates, updating the hourly and peak demand forecast, and incorporating data from September's heat event into the hourly forecast. The CEA will also oversee the transition to a new forecast framework, and use of an 'additional achievable' framework for transportation similar to what CEC uses for uncommitted energy efficiency and fuel substitution. The new forecast framework will simplify the number of permutations of the forecast to focus on the combinations that utilities, CAISO, and CPUC use for planning. The additional achievable framework for transportation allows for more flexibility in scenario design that better captures the uncertainty in this rapidly changing sector.
The CEA will provide policy direction on development of scenarios looking at energy demand of various fuels and their associated emissions through 2050. These activities are essential to CEC's mission to supporting statewide energy planning and provide insights around the impacts of the clean energy transition and policy recommendations to mitigate these impacts.

6. Reports to: (*Class Title/Level*)

Director of Energy Assessments Division (CEA)

7. Relationship with Department Director (*Select one)*

☑ Member of department's Executive Management Team, and has frequent contact with director on a wide range of department-wide issues.

☐ Not a member of department's Executive Management Team but has frequent contact with the Executive Management Team on policy issues.

(*Explain*):

8. Organizational Level *(Select one)*

☐ 1st ☐ 2nd ☐ 3rd ☑ 4th ☐ 5th (mega departments only - 17,001+ allocated positions)

B. SUMMARY OF REQUEST

9. What are the duties and responsibilities of the CEA position? Be specific and provide examples.

The EAD's mission is to provide data, analysis and assessments that inform clean energy policy. The division provides data insights and assessments on system reliability, supply portfolios, and statewide energy demand. The EAD's efforts have rapidly expanded as a result of the state's long term climate goals, the power outages in August 2020 and tight system conditions of summer 2021 and September 2022, and the changing dependency on natural gas and how that system will change to meet climate goals. The EAD needs to make numerous improvements to the models and approaches it uses to adequately address and inform the state's electricity planning process and inform policy.

The CEC provides policy leadership over the California Demand Forecast, which is foundational to energy planning across energy agencies. The CEA will oversee policy decisions around major forecast changes year over year. For the next major forecast, these include updating projections of economic and demographic data, updating the electricity rates, updating the hourly and peak demand forecast, and incorporating data from September's heat event into the hourly forecast. The CEA will also oversee the transition to a new forecast framework, and use of an 'additional achievable' framework for transportation similar to what CEC uses for uncommitted energy efficiency and fuel substitution. The new forecast framework will simplify the number of permutations of the forecast to focus on the combinations that utilities, CAISO, and CPUC use for planning. The additional achievable framework for transportation allows for more flexibility in scenario design that better captures the uncertainty in this rapidly changing sector.

The CEA will provide policy direction on development of scenarios looking at energy demand of various fuels and their associated emissions through 2050. Scenarios focused on transportation and building electrification and provide insights to long-term energy planning. The CEA will help define the reference scenario and policy compliance scenario, which assesses impacts of proposed policies and programs, such as the Air Resource Board's Advanced Clean Cars II regulation.

B. SUMMARY OF REQUEST (continued)

10. How critical is the program's mission or purpose to the department's mission as a whole? Include a description of the degree to which the program is critical to the department's mission.

- ☑ Program is directly related to department's primary mission and is critical to achieving the department's goals.
- ☐ Program is indirectly related to department's primary mission.
- ☐ Program plays a supporting role in achieving department's mission (i.e., budget, personnel, other admin functions).

Description:

The Energy Assessment Division (EAD) performs modeling activities to support state energy planning proceedings and policy development. Recently, the scope of the modeling activities has expanded in scope and importance, and currently includes:

Electricity system models to assess types of electricity generation resources that need to be built to meet state clean-energy goals, ensure proper system operations, and assess electric system reliability.

Natural gas models to project gas prices for consumers, understand system dynamics (e.g., how much storage of natural gas is needed), and natural gas reliability as well as the reliability of the electric system resulting from the use of natural gas fired power plants.

Demand models to help project what electricity and natural gas will be needed to meet customer demand.

The EAD’s key products include the California Demand Forecast, long-term demand scenarios, the SB 100 Joint Agency Report - which explores scenarios that will help California achieve 100 percent zero carbon - reliability analyses, including Summer Stack Analysis, California Reliability Outlook, and Winter Reliability assessment. The demand forecast and scenarios are foundational to energy planning by the CEC and CPUC as well as the SB 100 analysis to achieve renewable and zero carbon resources targets and electricity sector decarbonization.

B. SUMMARY OF REQUEST (continued)

11. Describe what has changed that makes this request necessary. Explain how the change justifies the current request. Be specific and provide examples.

The EAD's mission is to provide data, analysis and assessments that inform clean energy policy. The division provides data insights and assessments on system reliability, supply portfolios, and statewide energy demand. The EAD's efforts have rapidly expanded as a result of the state's long term climate goals, the power outages in August 2020 and tight system conditions of summer 2021 and September 2022, and the changing dependency on natural gas and how that system will change to meet climate goals. The EAD needs to make numerous improvements to the models and approaches it uses to adequately address and inform the state's electricity planning process and inform policy. New assessments by the EAD will be paramount to critical policy decisions that will impact energy planning, such as developing scenarios to account for transportation and building electrification. The CEA will provide policy leadership over new frameworks for and improvements to the demand forecast, sector modeling, hourly load shape development and analysis, and long-term demand scenario development. The demand forecast and scenarios developed under the CEA's guidance will be used by the CPUC, load-serving entities, local governments and other entities in energy planning and decision-making around distribution system upgrades and investments.

With the new reporting and assessment requirements called for in legislation, the division is receiving 12 new positions and additional funding for external technical support. The EAD is proposing a reorganization to better align with these new requirements and the new positions will be integrated into the new organizational structure.

C. ROLE IN POLICY INFLUENCE

12. Provide 3-5 specific examples of policy areas over which the CEA position will be the principle policy maker. Each example should cite a policy that would have an identifiable impact. Include a description of the statewide impact of the assigned program.

Specific examples of policy areas over which the CEA position will be the principal policymaker include:

Demand Forecast: The CEC will provide policy leadership over the California Demand Forecast, which is foundational to energy planning across energy agencies. The CEA will oversee policy decisions around major forecast changes year over year. For the next major forecast, these include updating projections of economic and demographic data, updating the electricity rates, updating the hourly and peak demand forecast, and incorporating data from September's heat event into the hourly forecast. The CEA will also oversee the transition to a new forecast framework, and use of an 'additional achievable' framework for transportation similar to what CEC uses for uncommitted energy efficiency and fuel substitution. The new forecast framework will simplify the number of permutations of the forecast to focus on the combinations that utilities, CAISO, and CPUC use for planning. The additional achievable framework for transportation allows for more flexibility in scenario design that better captures the uncertainty in this rapidly changing sector.

Demand Scenarios: The CEA will provide policy direction on development of scenarios looking at energy demand of various fuels and their associated emissions through 2050. Scenarios focused on transportation and building electrification and provide insights to long-term energy planning. The CEA will help define the reference scenario and policy compliance scenario, which assesses impacts of proposed policies and programs, such as the Air Resource Board's Advanced Clean Cars II regulation.

The CEA will be responsible for a large portion of the division's contribution to the Integrated Energy Policy Report (IEPR). The Integrated Energy Policy Report is the CEC's primary policy report, adopted biannually. The forecast is one of the CEC's core responsibilities, mandated by statute (Public Resources Code section 25301 (s)) to be included in the IEPR. The forecast is built based on policies, and estimates the impacts of policies on energy demand. The CEA will also be responsible for determining how new policies in the IEPR are incorporated into subsequent forecasts. An example of this is the Additional Achievable Fuel Substitution forecast, which estimates the impacts of building electrification and other policies on energy demand. This is cyclical work, where CEC policy in the IEPR is based on the most recent forecast developed under this CEA. The adopted forecast and demand scenarios will inform policy changes for:

- The state's resource adequacy requirements/planning for resource adequacy, and integrated resource planning
- local reliability for transmission planning
- The winter system peak associated with building electrification has Renewable Portfolio Standard and GHG emission mitigation implications, as an early morning peak will not be able to be met with solar PV.
- TOU rate structures by reviewing the hourly peak day profile and EV charging profiles and running scenarios on how to design the rate structure to distribute flexible loads to off peak hours
- The future of the natural gas system and transition away from natural gas. The peak winter day natural gas forecast will inform policy recommendations around natural gas demand declining with fuel switching. Equity is an important consideration as natural gas infrastructure may start to be decommissioned in the future.

The CEA will also oversee policy development related to the state's load shifting goal, required by SB 846. This goal will focus on reducing net peak electrical demand, and the CEA will recommend policies to increase demand response and load shifting without increasing greenhouse gas emissions or increase electric rates.

The CEA will also oversee a new transportation fuels transition study which will result in policy recommendations around refinery operations as transportation is electrified. Equity is an important consideration in this study.

The forecast and demand scenarios will also inform new policies needed to meet Green House Gas (GHG) reduction targets. The 2021 demand scenarios highlighted that current and proposed policies are insufficient to meeting GHG emission reduction targets and that more will need to be done. These policies will be developed with CEAs over the CEC's implementation programs (e.g., FTD, RED)

C. ROLE IN POLICY INFLUENCE (continued)

13. What is the CEA position's scope and nature of decision-making authority?

The CEC provides policy leadership and management direction in demand forecast, sector modeling, hourly load shape development and analysis, and long-term demand scenario development; advises leadership on research direction, investment strategy, and complex energy sector technology and policy matters; manages Division programs and projects; leads the development and implementation of Division policies and administrative activities, including managing the Division budget, work plans, and processes; assessing and supporting staff activities and performance; and oversees the Division's activities related to technology transfer and quantification and communication of program benefits; performs the functions of the Director in the Director's absence.

The CEA will have decision-making authority over the technical direction of assignments in their portfolio. The CEA will oversee the finalization of products and policy recommendations for review and approval by the Director, Executive Director, CEC commissioners and/or California Energy Commission, depending on the level of review commensurate to the decision at hand.

14. Will the CEA position be developing and implementing new policy, or interpreting and implementing existing policy? How?

Both. The CEA will implement existing policies, laws, and current programs. However, they will also be required to develop new programs based on regulations and policies, such as the impact of the Advanced Clean Cars II regulation on future energy demand.